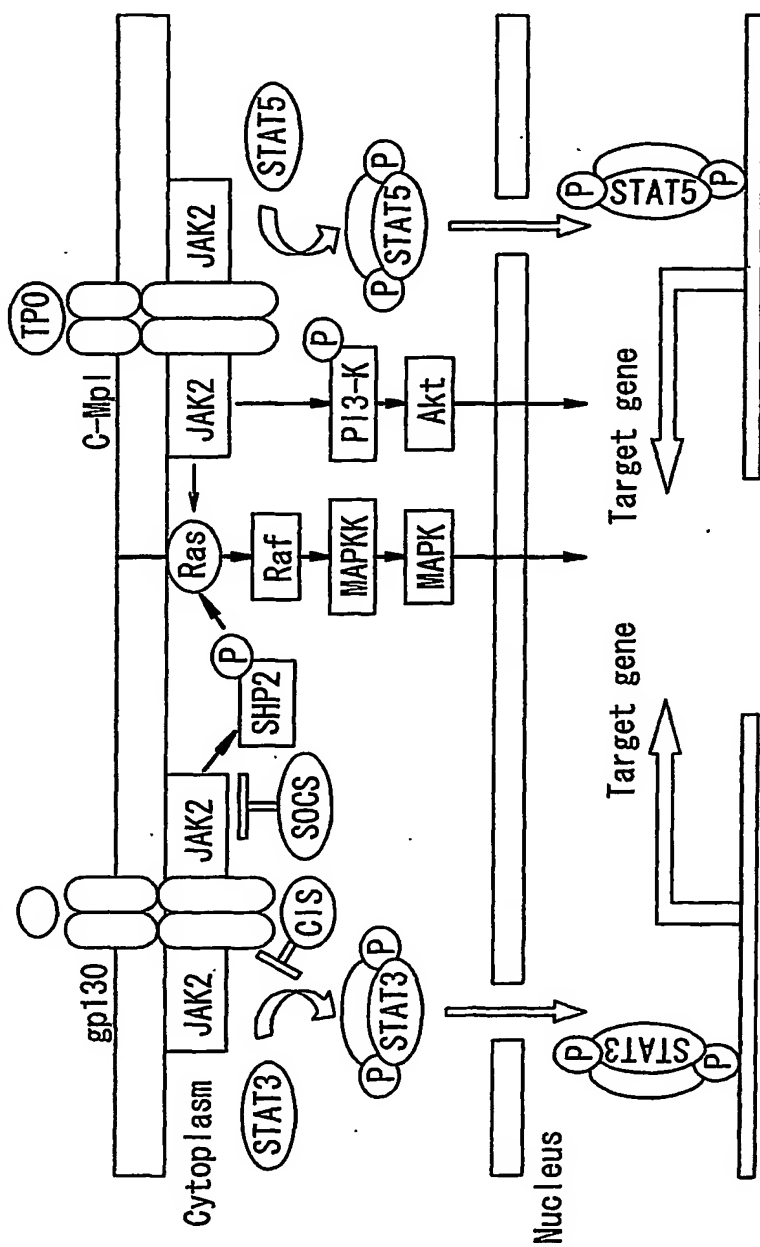


FIG. 1 Self-replication signal in hematopoietic stem cell



Active STAT

FIG.2 GCsam STAT ires EGFP

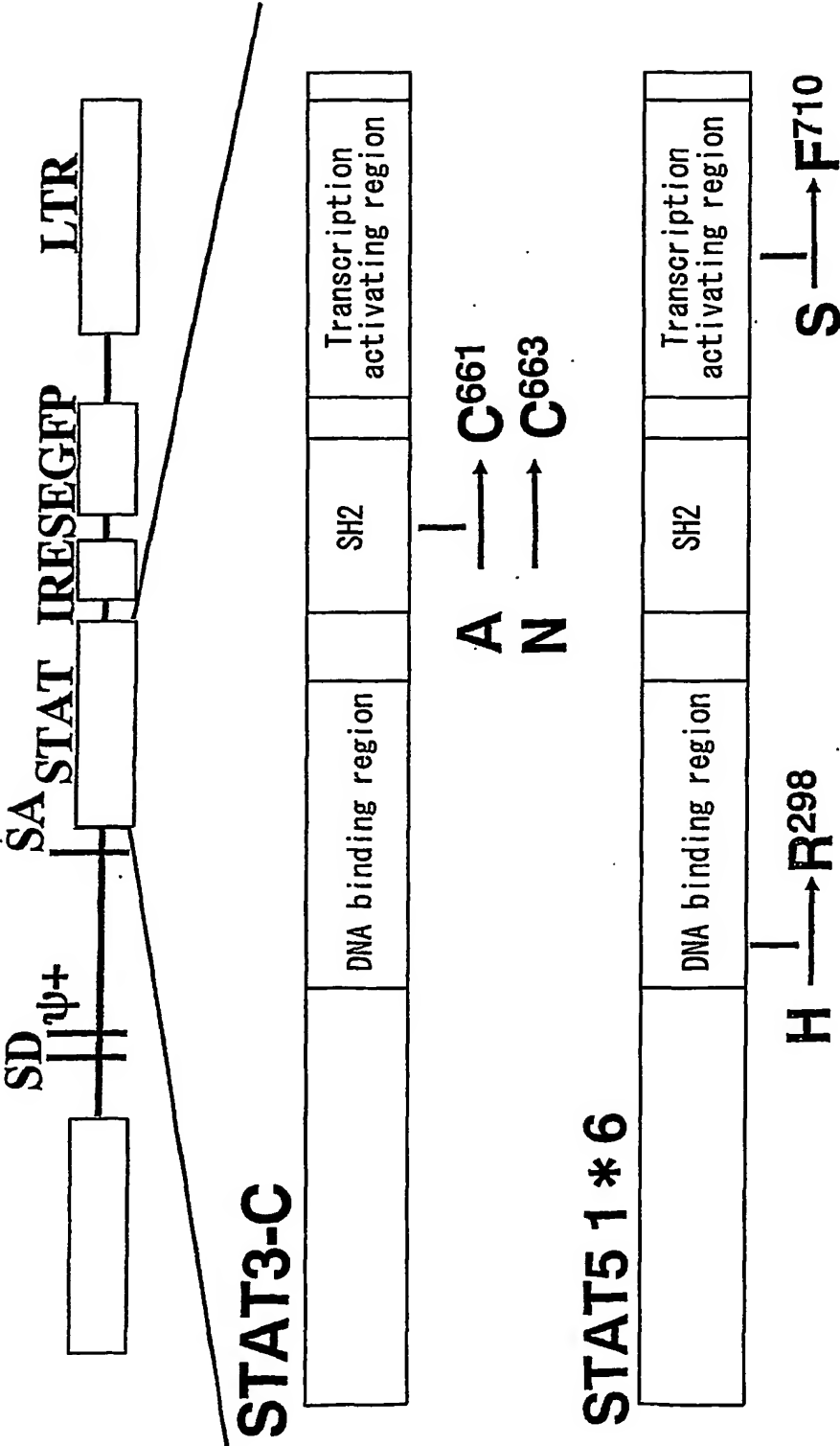
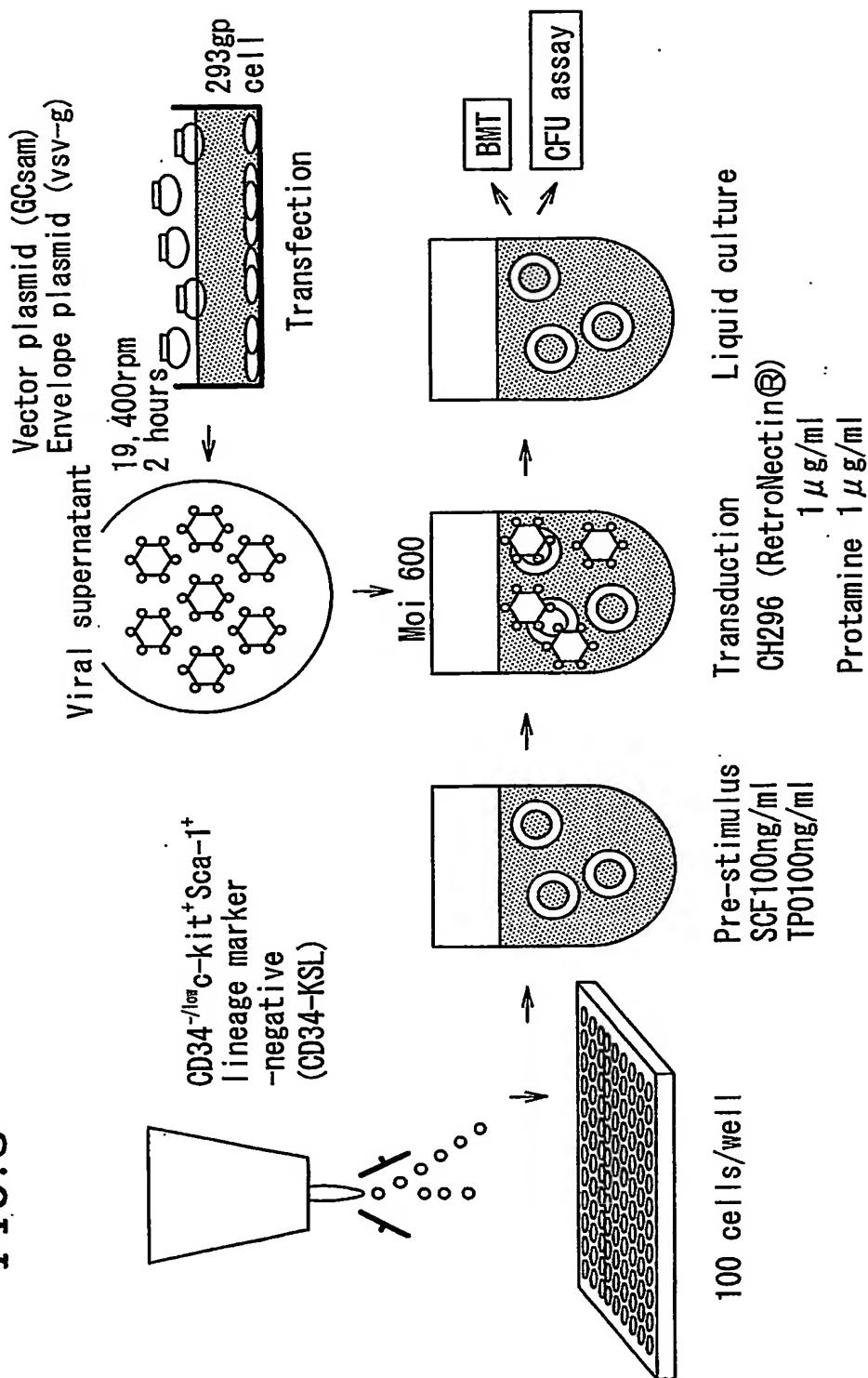


FIG.3

Transduction of HSC using retrovirus



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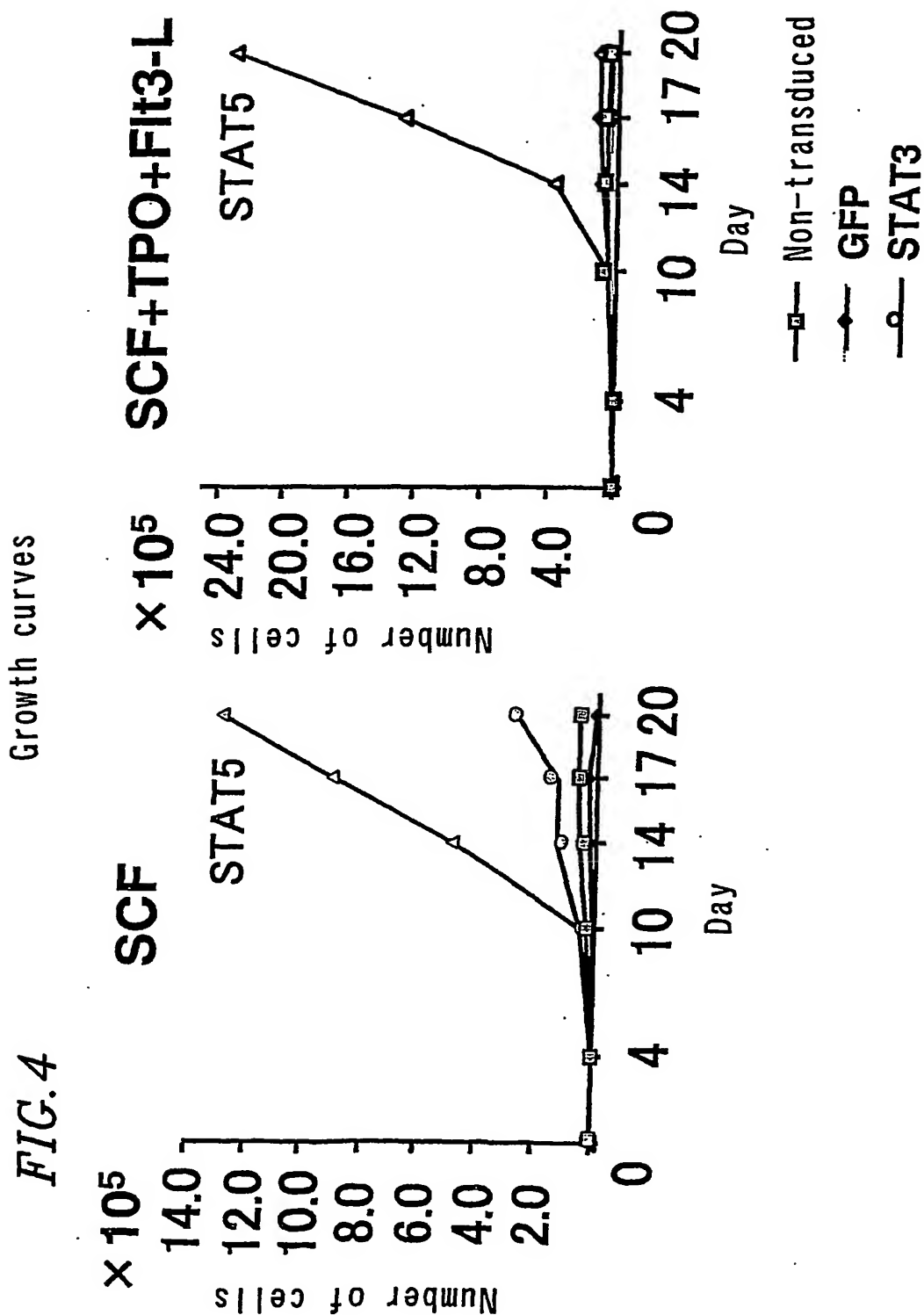
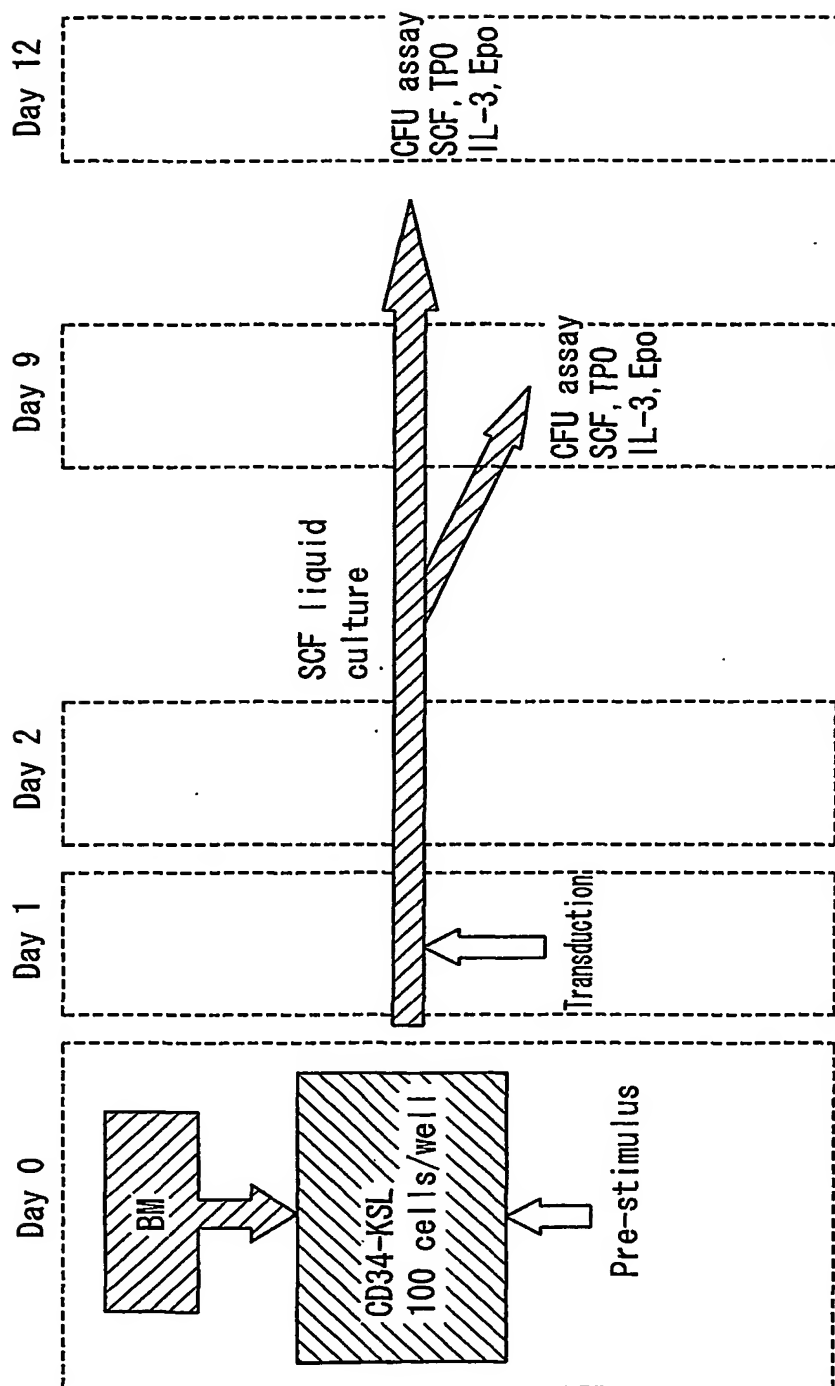


FIG. 5



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FIG. 6

Colony assay

Virus	CFU value							
	Day 9				Day 12			
	Per total cells		Per 10 ³		Per total cells		Per 10 ³	
	HPP	CFCs	HPP	CFCs	HPP	CFCs	HPP	CFCs
GFP	36	42	36	41	48	390	3	26
STAT3	12	54	15	65	36	180	3	16
STAT5	222	378	8	14	1848	348	70	13

HPP: High Proliferative Colony Forming Cell
 CFC: Colony Forming Cell

HPP-CFCs

FIG. 7

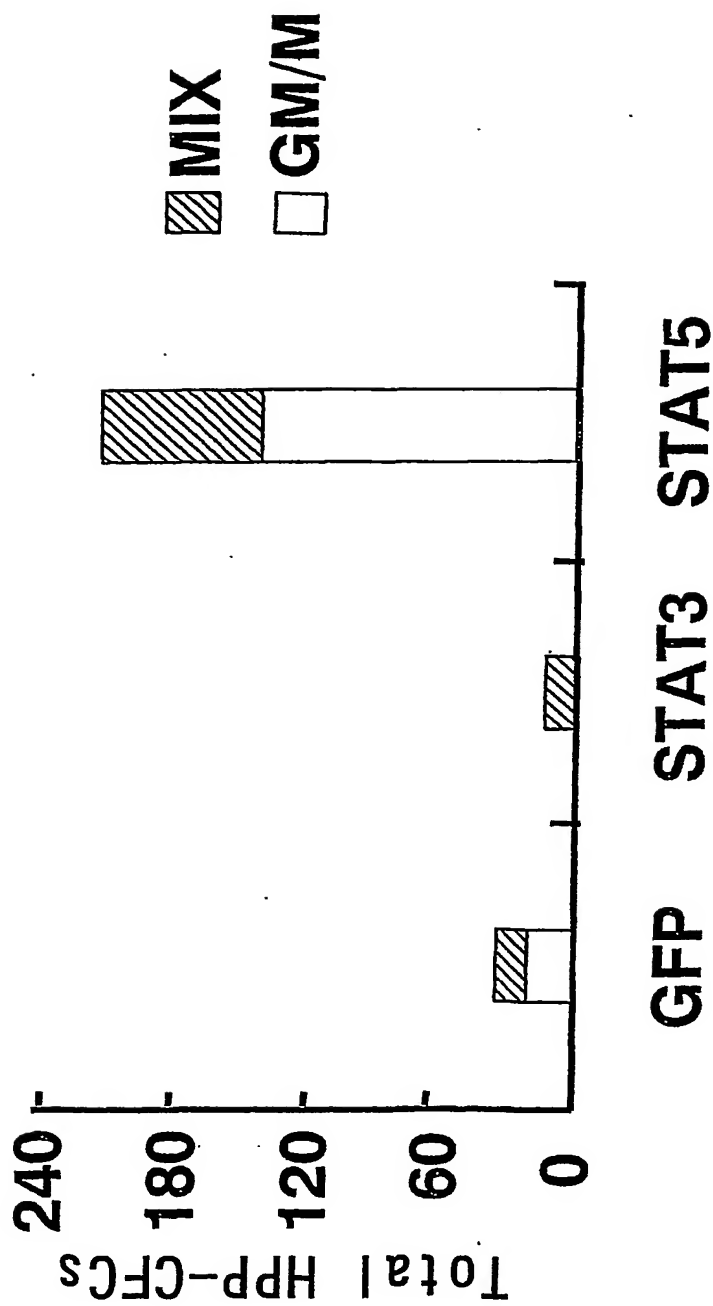
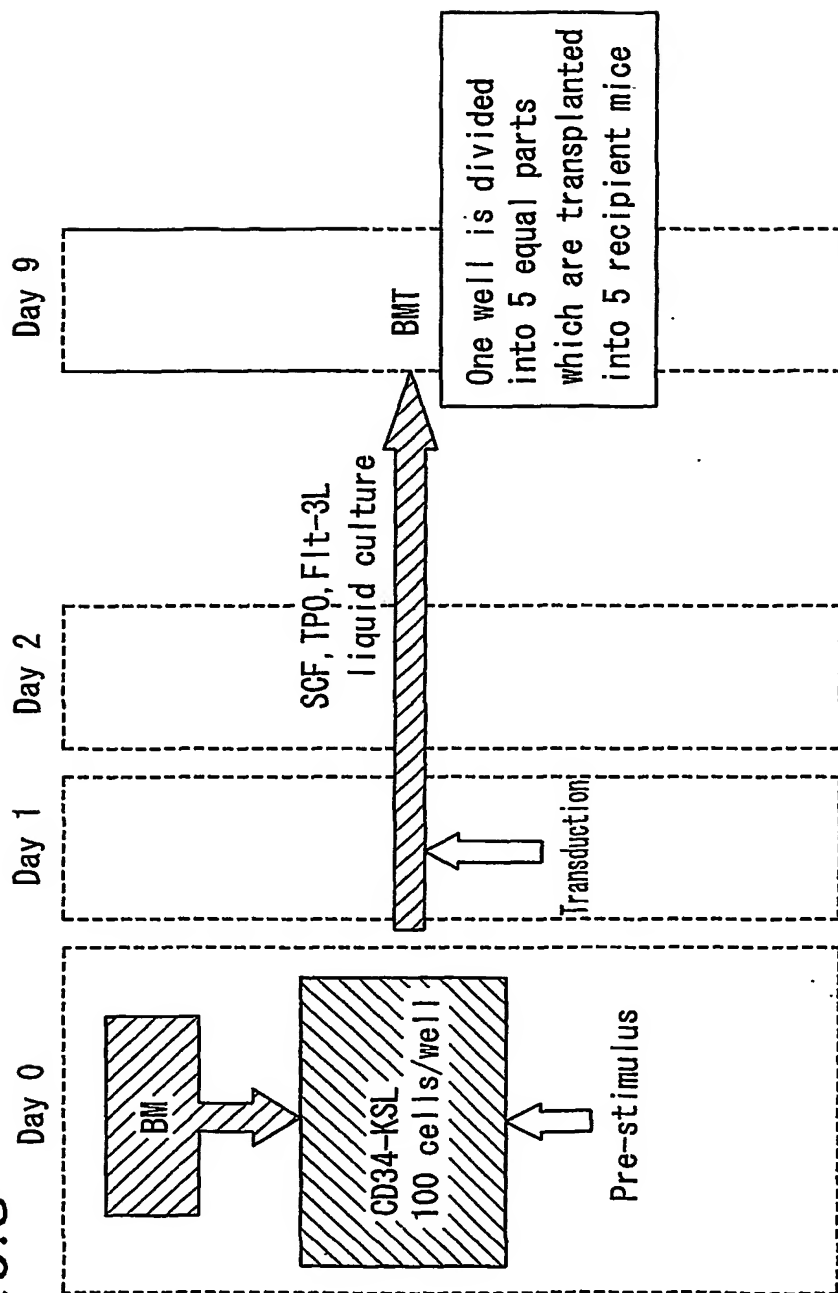


FIG. 8



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FIG. 9

Reconstruction of lymphocyte and myelocyte by HSC transduced with active STAT5

Agent	Virus	No. Positive HSC	Total mouse leukocyte	Bone marrow cell	Chimerism %	
					B lymphocyte	T lymphocyte
SCF	GFP	20	0/5	-	-	-
	STAT5	20	0/5	-	-	-
SCF+TPO	GFP	20	0/4	-	-	-
+Flt-3L	STAT5	20	3/3	12.4±9.2 (n=3)	8.9±8.7 (n=3)	0.3±0.2 (n=3)
					2.7±3.5 (n=3)	